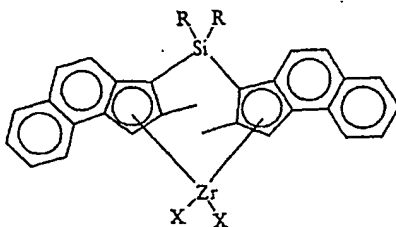


AMENDMENTS TO THE CLAIMS

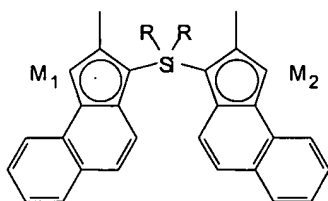
1. (Original) A process for the diastereoselective synthesis of rac-diorganosilylbis(2-methylbenzo[e]indenyl)zirconium compounds of the formula I,



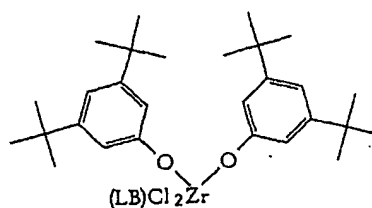
(I)

which comprises the following steps:

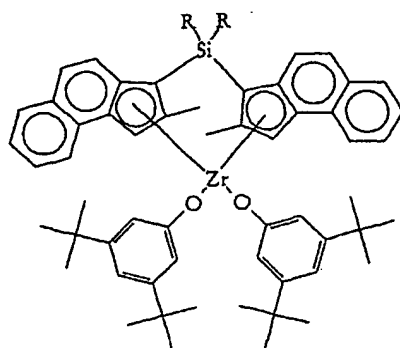
- a) reaction of a compound of the formula II with a zirconium bisphenoxide complex of the formula III to form the ansa-zirconocene bisphenoxide complex of the formula IV,



(II)



(III)



(IV)

- b) replacement of the phenoxide groups of IV by X using suitable replacement reagents to give the compound of the formula I;

where

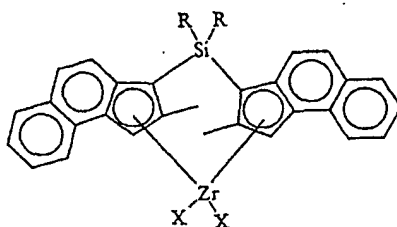
the substituents X can be identical or different and are each F, Cl, Br, I, or linear, cyclic or branched C₁₋₁₀-alkyl; and

the substituents R can be identical or different and are each linear, cyclic or branched C₁₋₁₀-alkyl or C₆₋₁₀-aryl; and

LB is a suitable Lewis base, and

M₁ and M₂ are monovalent positive alkali metal ions or M₁ and M₂ together represent a divalent positive alkaline earth metal ion.

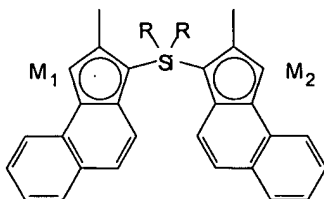
2. (Original) A process as claimed in claim 1 for the diastereoselective synthesis of rac-diorganosilylbis(2-methylbenzo[e]indenyl)zirconium compounds of the formula I,



(I)

which comprises the following steps:

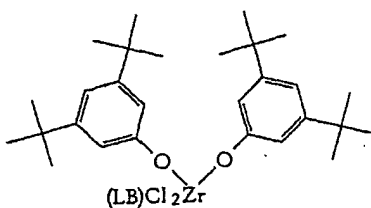
- a) deprotonation of 2-methylbenzo[e]indene by means of a suitable deprotonating agent;
- b) reaction of the deprotonated 2-methylbenzo[e]indene with a diorganosilyl compound R_2SiY_2 , where the substituents R can be identical or different and are each linear, cyclic or branched C_{1-10} -alkyl or C_{6-10} -aryl and the leaving groups Y can be identical or different and are each F, Cl, Br or I, and subsequent repeat deprotonation by means of a suitable deprotonating agent, giving a compound of the formula II:



(II)

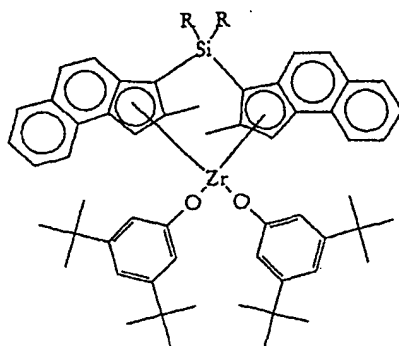
where M₁ and M₂ are monovalent positive alkali metal ions or M₁ and M₂ together represent a divalent positive alkaline earth metal ion;

- c) reaction of the compound of the formula II with a zirconium bisphenoxide complex of the formula III:



(III)

where LB is a suitable Lewis base, to give a compound of the formula IV:



(IV)

- d) reaction of the compound of the formula IV with suitable replacement reagents so as to replace the phenoxide groups of IV by X to give the compound of the formula I, where the substituents X can be identical or different and are each F, Cl, Br, I or linear, cyclic or branched C₁₋₁₀-alkyl.
3. (Currently Amended) A process as claimed in claim 2, wherein the deprotonating agent is selected from among n-butyllithium, tert-butyllithium, sodium hydride, potassium tert-butoxide, Grignard reagents of magnesium, magnesium compounds, ~~compounds such as, in particular, di-n-butylmagnesium, (n,s)-dibutylmagnesium and other suitable~~ alkaline earth metal alkyl compounds and alkali or alkali metal alkyl compounds.
4. (Currently amended) A process as claimed in ~~claim 2 or 3~~ claim 2 carried out without isolation of intermediates after individual process steps.
5. (Currently amended) A process as claimed in ~~any of the preceding claims~~ claim 1, wherein the replacement reagent used is an aliphatic or aromatic carboxylic acid halide ~~such as acetyl chloride, phenylacetyl chloride, 2-thiophenacetyl chloride, trichloroacetyl chloride, trimethylacetyl chloride, O-acetylmandelyl chloride, 1,3,5-benzenetricarboxylic chloride, 2,6-pyridinecarboxylic chloride, tert-butylacetyl chloride, chloroacetyl chloride, 4-chlorobenzacetyl~~

~~chloride, dichloroacetyl chloride, 3-methoxyphenylacetyl chloride, acetyl bromide, bromoacetyl bromide, acetyl fluoride or benzoyl fluoride, either in solvents or as such optionally in a solvent.~~

6. (Currently amended) A process as claimed in ~~any of claims 1-4~~ claim 1, wherein the replacement reagent used is SOCl_2 , silicon tetrachloride, methylaluminum dichloride, dimethylaluminum chloride, aluminum trichloride or ethylaluminum dichloride.

7. (Currently amended) A process as claimed in ~~any of claims 1-4~~ claim 1, wherein the replacement reagent used is HF, HBr, HI, ~~preferably HCl or HCl~~, ~~either as such or as~~ optionally as a solution in water or organic solvent ~~solvents such as diethyl ether, DME or THF.~~

8. (Currently amended) A process as claimed in ~~any of claims 1-4~~ claim 1, wherein the replacement reagent used is an organoaluminum compound ~~such as a tri- C_4 - C_{10} -alkylaluminum, i.e. trimethylaluminum, triethylaluminum, tri-n-butylaluminum, triisobutylaluminum or a dialkylaluminum chloride or an aluminum sesquichloride.~~

9. (Currently amended) A process as claimed in ~~any of the preceding claims~~ claim 1, wherein the reaction is carried out in Lewis base-containing solvent mixtures of hydrocarbons and ethers or amines or both, ~~preferably toluene and THF, toluene and DME or toluene and TMEDA.~~

10. (Currently amended) A process as claimed in claim 9, wherein the Lewis base is present in an amount of 0.01–50 mol%, ~~preferably 0.1–10 mol%~~, based on the solvent mixture.

11. (Currently amended) A process as claimed in ~~any of the preceding claims~~ claim 1, wherein LB in the formula III is ~~selected from among~~ tetrahydrofuran (THF), dimethoxyethane (DME) and tetramethylethanediamine or tetramethylethanediamine (TMEDA).

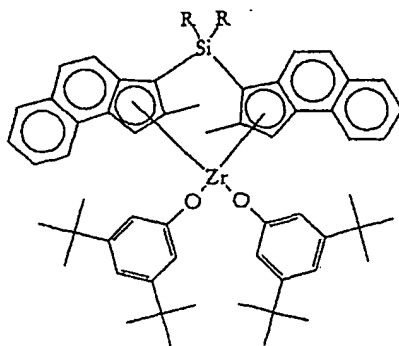
12. (Currently amended) A process as claimed in ~~any of the preceding claims~~ claim 1, wherein M_1 and M_2 are ~~selected from among~~ lithium, sodium, potassium, rubidium or cesium ions or together represent magnesium.

13. (Currently amended) A process as claimed in ~~any of the preceding claims~~ claim 1, wherein the substituents R are ~~selected from among~~ methyl, ethyl, n-propyl, isopropyl, n-butyl, isobutyl ~~and phenyl~~, phenyl and combinations or combinations thereof.

14. (Currently amended) A process as claimed in ~~any of the preceding claims~~ claim 1 wherein the substituents X are ~~selected from among~~ F, Cl, Br, I, methyl, ethyl, n-propyl, isopropyl, n-butyl ~~and isobutyl~~, or isobutyl ~~preferably Cl and/or methyl.~~

15. (Currently amended) A process as claimed in ~~any of the preceding claims~~ claim 1, wherein R is methyl or ethyl, X is Cl and LB is THF or DME.

16. (Original) A racemic transition metal compound of the formula IV:



(IV)

where the substituents R may be identical or different and are each linear, cyclic or branched C₁₋₁₀-alkyl or C₆₋₁₀-aryl.

17. (Original) A compound as claimed in claim 16, wherein the substituents R are selected ~~from among~~ methyl, ethyl, n-propyl, isopropyl, n-butyl, isobutyl ~~and phenyl and or phenyl~~ combinations thereof.

18. (Currently amended) A catalyst which comprises the ~~The use of a~~ racemic compound as claimed in claim 16 ~~claim 16 or 17 as a catalyst or as a constituent of a catalyst for the polymerization of olefinically unsaturated compounds or as a reagent or catalyst in stereoselective synthesis.~~